A SYSTEM AND METHOD FOR REAL-TIME JITTER CONTROL AND PACKET-LOSS CONCEALMENT IN AN AUDIO SIGNAL

ABSTRACT OF THE INVENTION

An "adaptive audio playback controller" operates by decoding and reading received packets of an audio signal into a signal buffer. Samples of the decoded audio signal are then played out of the signal buffer according to the needs of a player device. Jitter control and packet loss concealment are accomplished by continuously analyzing buffer content in real-time, and determining whether to provide unmodified playback from the buffer contents, whether to compress buffer content, stretch buffer content, or whether to provide for packet loss concealment for overly delayed or lost packets as a function of buffer content. Further, the adaptive audio playback controller also determines where to stretch or compress particular frames or signal segments in the signal buffer, and how much to stretch or compress such segments in order to optimize perceived playback quality.